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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,146	02/17/2004	Jason Victor Tsai	LeCr:Guide1	6027

26790 7590 06/22/2005

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EXAMINER	
HOLLINGTON, JERMELE M	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 06/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,146	TSAI ET AL.	
	Examiner	Art Unit	
	Jermele M. Hollington	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 February 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, mounting apparatus [claims 8-9 and 18-20] must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 12, the claim states: "at least one guide enhancing mechanism selected from the group consisting of: (a) a funnel shaped opening, and (b) an enlarged, partial funnel shaped opening." However, the applicants' specification describe in pages 12-14 that a guide or a first tip passageway end consist the opening as claimed. The examiner was unable to locate in the specification that that guide enhancing mechanism consists the opening as claimed.

Therefore, for examination purposes, the examiner is taking a position that a guide has the opening and not the guide enhancing mechanism as claimed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 7-11, 13-14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Barabi et al (6208155).

Regarding claim 1, Barabi et al disclose [see Fig. 2] a guide (test socket 11) for tip (probe tip 21) to transmission path contact (solder ball contact 43), said guide comprising at least one

guide insulator (IC platform 25), at least one passageway (guide holes 27) defined by said at least one guide insulator (25), said at least one passageway (27) having a tip passageway end (bottom of hole 27) and a transmission path passageway end (top of hole 27); said tip passageway end (bottom of 27) suitable for at least partially accommodating said tip (21); said transmission path passageway end (top of 27) suitable for at least partially accommodating a transmission path (43); and said tip (21) contacting said transmission path (43) through said at least one passageway (27) when said transmission path (43) is positioned in said transmission path passageway end and said tip (21) is positioned within said tip passageway end.

Regarding claim 2, Barabi et al disclose said guide (25) facilitates relatively secure contact between said tip (21) and said transmission path (43).

Regarding claim 3, Barabi et al disclose said guide insulator (25) is removably interconnectable with a circuit board component having at least one transmission path (43).

Regarding claim 4, Barabi et al disclose said tip passageway end guides (top and bottom of 27) said tip (21) towards said transmission path (43).

Regarding claim 7, Barabi et al disclose said at least one guide insulator (25) is at least one divider guide insulator (frame wall 17).

Regarding claim 8, Barabi et al disclose said at least one guide insulator (25) further comprising a mounting apparatus (mounting spring 35) and at least one divider guide insulator (17).

Regarding claim 9, Barabi et al disclose said at least one guide insulator (25) further comprising a mounting apparatus (mounting spring 35) integral with at least one divider guide insulator (frame wall 17).

Regarding claim 10, Barabi et al disclose at least two guide insulators (25), said at least two guide insulators (25 and 17) being adjustable in relation to each other.

Regarding claim 11, Barabi et al disclose [see Fig. 2] a guide (test socket 11) for tip (probe tip 21) to transmission path contact (solder ball contact 43), said guide comprising a guide insulator (IC platform 25), at least one passageway (guide hole 27) defined by said at least one guide insulator (25), each passageway (27) having a passageway thickness, each passageway (27) having a tip passageway end (bottom of 27), said tip passageway end (bottom of 27) having a tip passageway end thickness, said tip passageway end suitable for at least partially accommodating a tip (21); each passageway having a transmission path passageway end (top of 27), said transmission path passageway end having a transmission path passageway end thickness, said transmission path passageway end suitable for at least partially accommodating said transmission path (43); and said tip (21) contacting said transmission path (43) through said at least one passageway (27) when said transmission path (43) is positioned in said transmission path passageway end and said tip (21) is positioned within said tip passageway end.

Regarding claim 13, Barabi et al disclose said transmission path passageway end (top of 27) is directly opposite said tip passageway end (bottom of 27).

Regarding claim 14, Barabi et al disclose said tip passageway end (bottom of 27) has an opening on a peripheral guide surface of said guide insulator (25).

Regarding claim 17, Barabi et al disclose including at least two passageways (27), said at least two passageways (27) being adjustable in relation to each other.

Regarding claim 18, Barabi et al disclose [see Fig. 2] a guide (test socket 11) for tip (probe tip 21) to transmission path contact (solder ball contacts 43), said guide (11) comprising:

(a) at least one mounting apparatus (mounting spring 35), (b) at least one divider guide insulator (frame wall 17), said at least one divider guide insulator (17) mountable in said at least one mounting apparatus (35), (b) at least one passageway defined by said at least one divider guide insulator (17), (c) each passageway having a tip passageway end (bottom of 27), said tip passageway end suitable for at least partially accommodating a tip (probe tip 21); (d) each passageway having a transmission path passageway end (top of 27), said transmission path passageway end suitable for at least partially accommodating said transmission path (43); and (e) said tip (21) contacting said transmission path (43) through said at least one passageway when said transmission path (43) is positioned in said transmission path passageway end and said tip (21) is positioned within said tip passageway end (bottom of 27).

Regarding claim 19, Barabi et al disclose said at least one mounting apparatus (mounting spring 35) and said at least one divider guide insulator (frame wall 17) are integral.

Regarding claim 20, Barabi et al disclose said at least one mounting apparatus (mounting spring 35) is divisible.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5-6 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barabi et al (6208155) in view of Bodenweber et al (6281692).

Regarding claims 5-6 and 15, Barabi et al disclose [see Fig. 2] a guide (test socket 11) for tip (probe tip 21) to transmission path contact (solder ball contact 43), said guide comprising at least one guide insulator (IC platform 25). However, they do not disclose at least one passageway includes a contact enhancing mechanism as claimed. Bodenweber et al disclose (see Fig. 1) a guide (test structure 10) for tip (tip of pogo pin 32) to transmission path contact (pin 34), said guide (10) comprising at least one guide insulator (interposer 12), at least one passageway (combination of passageways 22 and 24) having a tip passageway end and a transmission path passageway end; and said tip (32) contacting said transmission path (34) through said at least one passageway (22 and 24) wherein said at least one passageway (22 and 24) includes a contact enhancing mechanism (electrically conductive element 30) said tip (32) indirectly contacting said transmission path (34) via said contact enhancing mechanism (30). Further, Bodenweber et al teach that the addition of contact enhancing mechanism (conductive element 30) is advantageous because it maintains a good electrical contact between the tip and the transmission path. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Barabi et al by adding contact enhancing mechanism as taught by Bodenweber et al in order to maintain a good electrical contact between the tip and the transmission path.

Regarding claim16. Barabi et al disclose [see Fig. 2] a guide (test socket 11) for tip (probe tip 21) to transmission path contact (solder ball contact 43), said guide comprising at least one guide insulator (IC platform 25). However, they do not disclose a contact enhancing mechanism as claimed. Bodenweber et al disclose (see Fig. 1) a guide (test structure 10) for tip (tip of pogo pin 32) to transmission path contact (pin 34), said guide (10) comprising at least one

guide insulator (interposer 12), at least one passageway (combination of passageways 22 and 24) having a tip passageway end and a transmission path passageway end; and said tip (32) contacting said transmission path (34) through said at least one passageway (22 and 24) wherein said at least one passageway (22 and 24) includes a contact enhancing mechanism (electrically conductive element 30) said contact enhancing mechanism is selected from a group consisting of: (a) solid contact enhancing mechanism, (b) combination contact enhancing mechanism, and (c) soft contact enhancing mechanism [see col. 4, lines 31-34]. Further, Bodenweber et al teach that the addition of contact enhancing mechanism (conductive element 30) is advantageous because it maintains a good electrical contact between the tip and the transmission path. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Barabi et al by adding contact enhancing mechanism as taught by Bodenweber et al in order to maintain a good electrical contact between the tip and the transmission path.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dean (4061969), Frederickson et al (5955888), Barabi et al (6220870) and Hornchek et al (6541991) disclose a method and apparatus for testing contacting between two devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (517) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermele M. Hollington
Patent Examiner
Art Unit 2829

JMH
June 21, 2005